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TITLE: S.E.C. registered individual account  
investment advisor  
expert system

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The present invention is embodied in an improved automated investment system which operates as a Registered Investment Advisor to individually manage customer accounts. The investment system includes a data processing system, the base station, which performs asset allocation by distributing portfolio assets throughout a variety of different types of investment securities. The base station further performs (1) economic analysis by processing various economic indicators which have an impact on the value of securities, (2) fundamental analysis by processing corporate earnings, characteristics of management, quality of financial strength and product information, (3) technical analysis by identifying patterns of price and volume of securities for purpose of exploiting price trends of securities for financial gain and (4) risk/return analysis by processing total returns and systematic risk in a manner known by those skilled in the art as "modern portfolio theory" to compare the investment environment to current customer account holdings. All of this analysis may be performed without human interaction.

Fundamental analysis derives investment decisions from

the study of numerous forms of information about a company including, but not limited to, earnings per share, financial strength, sales, book value, dividend growth rate, etc. An example of a fundamental indicator is financial strength in which a stock or bond is rated A+, A, A-, B+, B, B-, C+ or C.sub.1-.

Next, those securities which are selected for each asset class on the basis of fundamental analysis information 420, are analyzed using statistical technical analysis 425. Each day, or at such time interval determined by Base Station owner or in "real time", prices are updated on the base station 425 to reflect the most recent price and volume of securities, thus providing the raw data necessary to perform statistical technical analysis. "Real time" is defined as the speed at which transactions are reported via electronic pricing media direct from the securities exchanges. How to perform Technical statistical analysis is described in The Encyclopedia of Technical Market Indicators by Robert W. Colby and Thomas A. Meyers (Business One Irwin), which is incorporated herein by reference for its teachings on performing technical analysis. Each security analyzed at this step is classified in one of five trading zones: (1) buy, (2) buy/hold, (3) hold, (4) sell/hold and (5) sell.

Technical analysis derives investment decisions from the study of, for example, price and volume information. Numerous derivative analyses are possible including, for example, advance/decline ratio, commodity channel index, cumulative volume index, Federal funds--prime rate spread index, McClellan oscillator, parabolic time/price system, relative strength index, stochastic, and TICK index. Many technical indicators are derived from

information regarding quantity of securities traded during a particular time period and price at which the securities traded. An example of a technical indicator is the relative strength index which is expressed mathematically as  $RSI = 100 - (100 / (1 + RS))$  where RS is the ratio of the exponentially smoothed moving average of n-period gains divided by the absolute value of the exponentially smoothed moving average of n-period losses.

Robert W. Colby and Thomas A. Meyers, "The Encyclopedia of Technical Market Indicators", pp. V-IX, 1-60, 72, 116, 135, 270, 379, 433, 473, 493, 515 (1988).